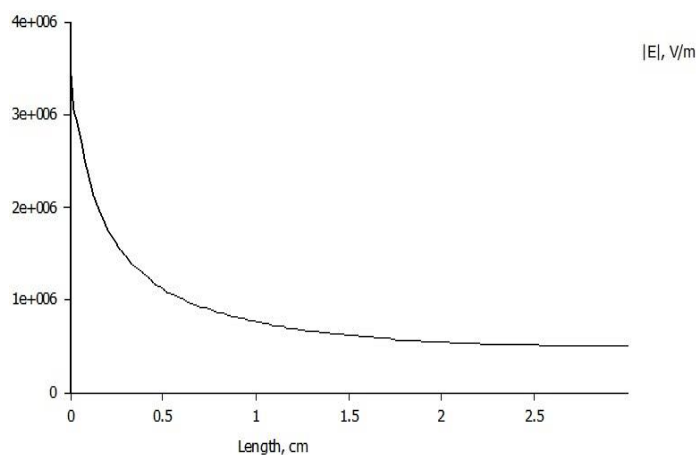
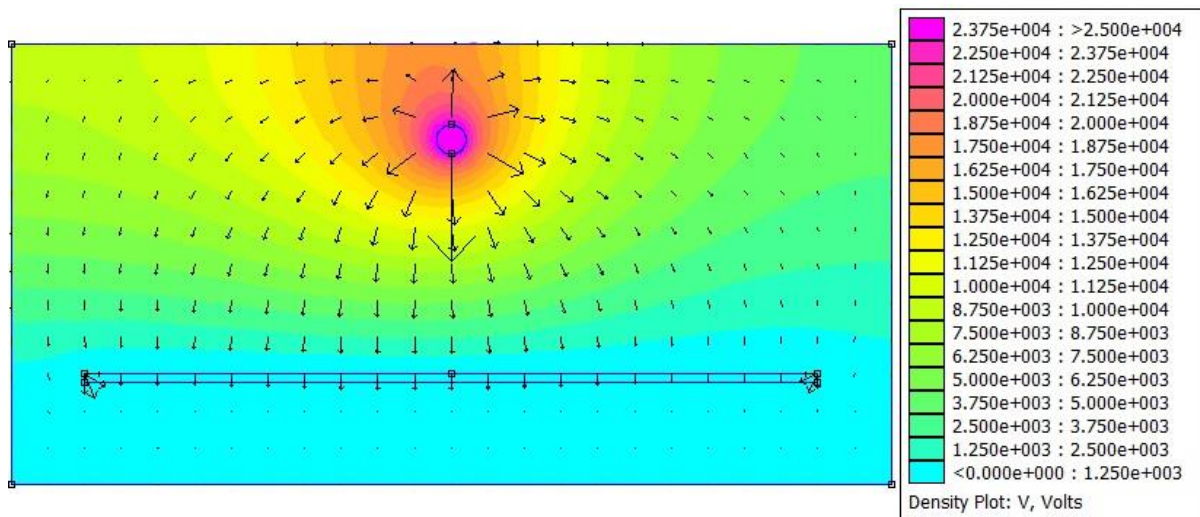


LAMPIRAN

Lampiran 1 Perhitungan Efisiensi

A. Perhitungan Efisiensi polaritas positif jarak sela 3 cm

1. Perhitungan Efisiensi 25 kV



1 - Notepad	
File	Edit
Format	View
Help	
% Column 0: Length, cm	
% Column 1: E , V/m	
0.00000000e+000	3.46299256e+006
2.01342282e-002	3.05248582e+006
4.02684564e-002	2.88248652e+006
6.04026846e-002	2.67708989e+006
8.05369128e-002	2.49950408e+006
1.00671141e-001	2.33247474e+006
1.20805369e-001	2.14238198e+006
1.40939597e-001	2.06019334e+006
1.61073826e-001	1.94576131e+006
1.81208054e-001	1.84413207e+006
2.01342282e-001	1.76895958e+006
2.21476510e-001	1.69383792e+006
2.41610738e-001	1.62842448e+006
2.61744966e-001	1.57192796e+006
2.81879195e-001	1.51783323e+006
3.02013423e-001	1.46384006e+006
3.22147651e-001	1.41432098e+006
3.42281879e-001	1.36954606e+006
3.62416107e-001	1.33371963e+006
3.82550336e-001	1.30060735e+006
4.02684564e-001	1.26752331e+006
4.22818792e-001	1.23446976e+006
4.42953020e-001	1.19664506e+006
4.63087248e-001	1.16605604e+006
4.83221477e-001	1.13875036e+006
5.03355705e-001	1.11144468e+006
5.23489933e-001	1.08413902e+006
5.43624161e-001	1.05991920e+006
5.63758389e-001	1.04526012e+006
5.83892617e-001	1.02781488e+006

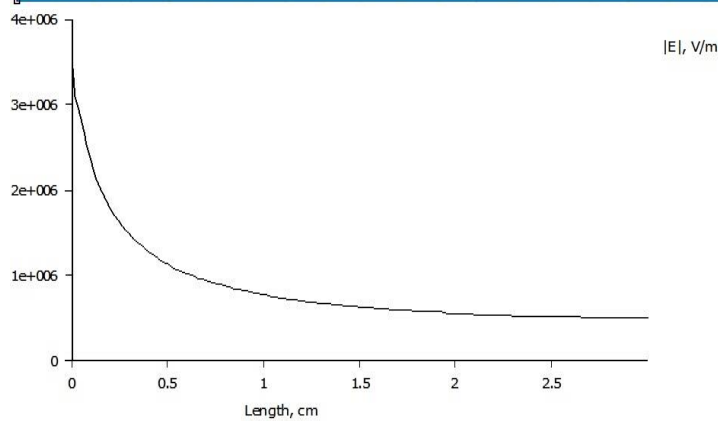
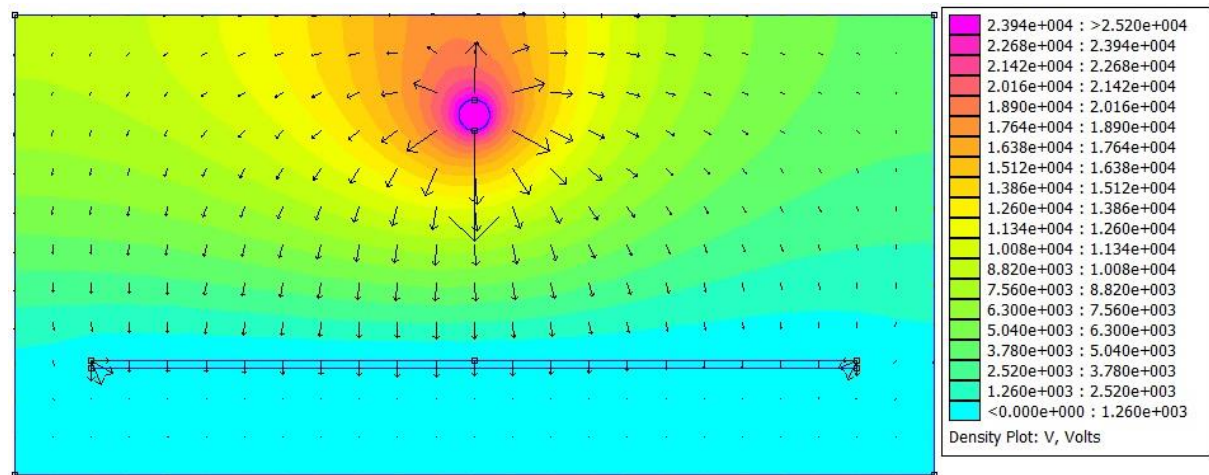
$$E_{maks} = 3,46299256 \cdot 10^6 \text{ V/m}$$

$$= 34,6299256 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{25}{3} = 8,333 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{8,333}{34,6299256} \times 100\% = 24,0630029\%$$

2. Perhitungan Efisiensi 25,20 kV



3 - Notepad

% Column 0: Length, cm	% Column 1: E , V/m
0.00000000e+000	3.49069650e+006
2.01342282e-002	3.07690571e+006
4.02684564e-002	2.90554641e+006
6.04026846e-002	2.69850661e+006
8.05369128e-002	2.51950011e+006
1.00671141e-001	2.35113454e+006
1.20805369e-001	2.15952103e+006
1.40939597e-001	2.07667489e+006
1.61073826e-001	1.96132740e+006
1.81208054e-001	1.85888512e+006
2.01342282e-001	1.78311126e+006
2.21476510e-001	1.70738862e+006
2.41610738e-001	1.64145188e+006
2.61744966e-001	1.58450338e+006
2.81879195e-001	1.52997590e+006
3.02013423e-001	1.47555078e+006
3.22147651e-001	1.42563554e+006
3.42281879e-001	1.38050243e+006
3.62416107e-001	1.34438939e+006
3.82550336e-001	1.31101221e+006
4.02684564e-001	1.27766349e+006
4.22818792e-001	1.24434552e+006
4.42953020e-001	1.20621822e+006
4.63087248e-001	1.17538448e+006
4.83221477e-001	1.14786036e+006
5.03355705e-001	1.12033624e+006
5.23489933e-001	1.09281214e+006
5.43624161e-001	1.06839855e+006
5.63758389e-001	1.05362220e+006
5.83892617e-001	1.03603740e+006

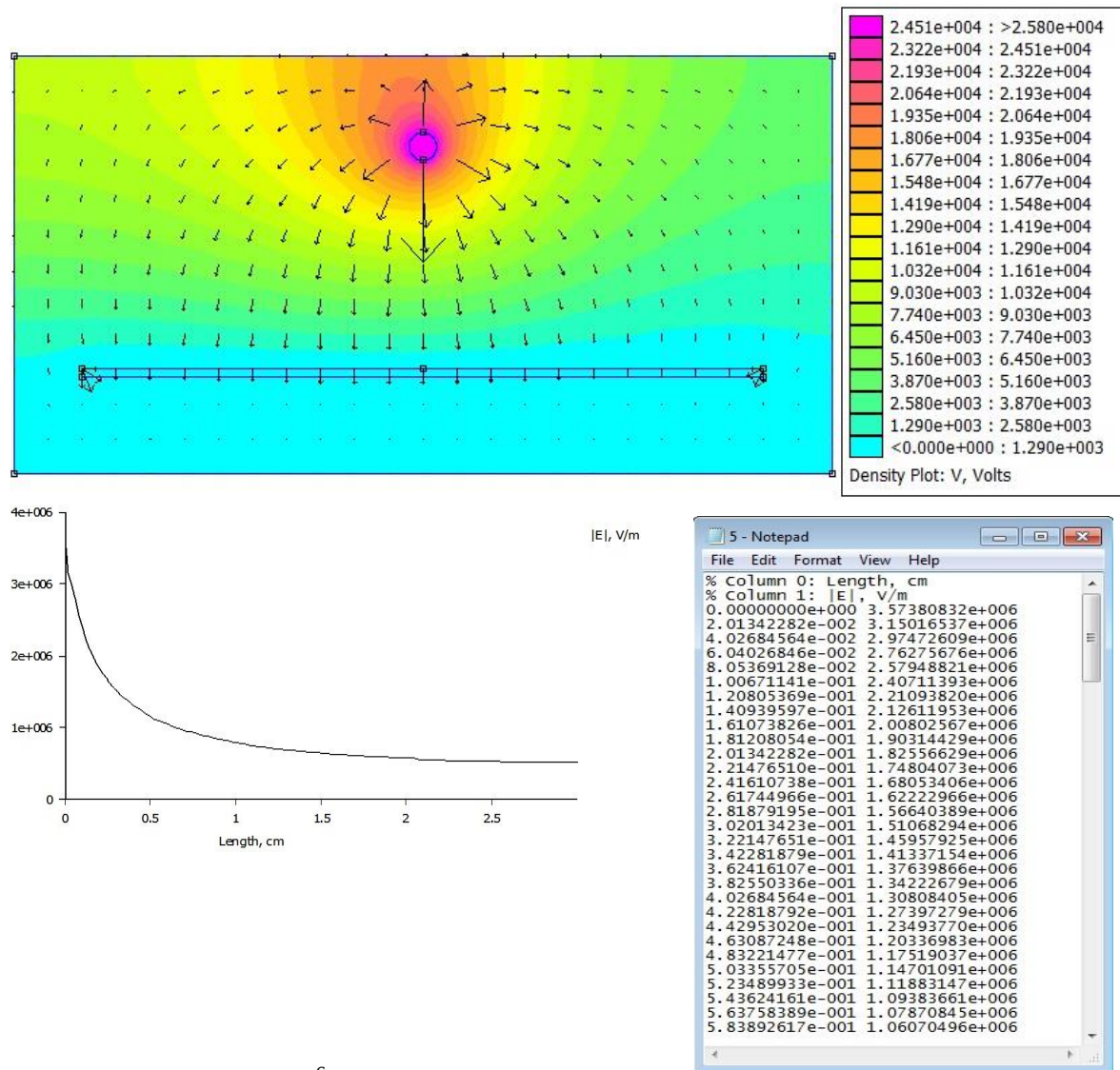
$$E_{maks} = 3,49069650 \cdot 10^6 \text{ V/m}$$

$$= 34,9069650 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{25,20}{3} = 8,4 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{8,4}{34,9069650} \times 100\% = 24,06396546\%$$

3. Perhitungan Efisiensi 25,80 kV



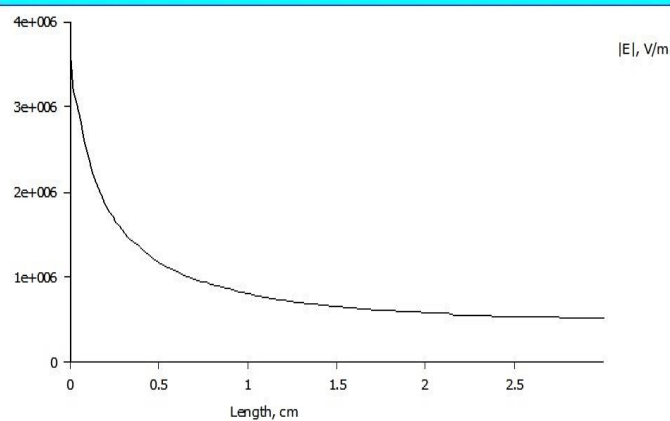
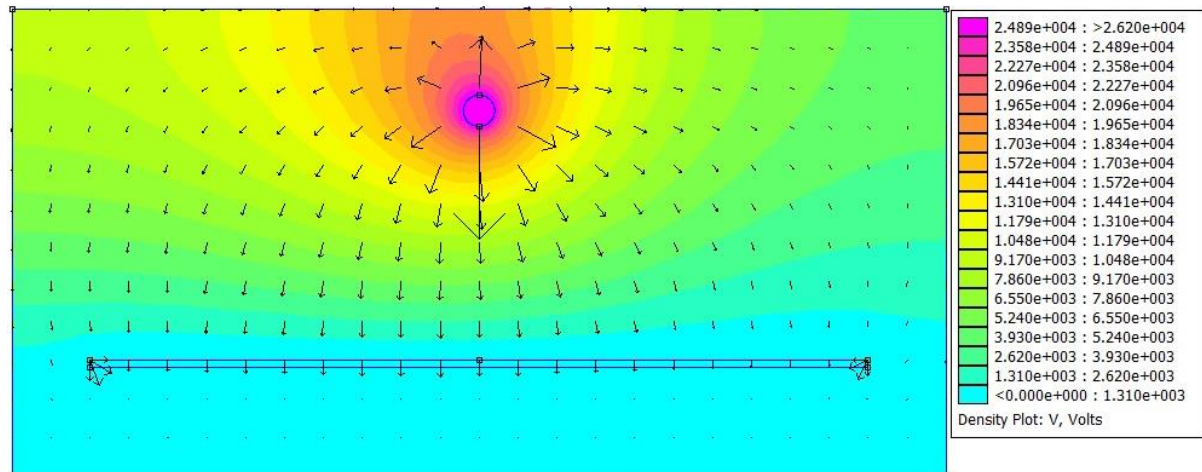
$$E_{maks} = 3,57380832 \cdot 10^6 \text{ V/m}$$

$$= 35,7380832 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{25,80}{3} = 8,6 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{8,6}{35,7380832} \times 100\% = 24,06396547\%$$

4. Perhitungan Efisiensi 26,20 kV



7 - Notepad

% column 0: Length, cm	% Column 1: E , V/m
0.00000000e+000	3.62921620e+006
2.01342282e-002	3.19900514e+006
4.02684564e-002	3.02084587e+006
6.04026846e-002	2.80559020e+006
8.05369128e-002	2.61948027e+006
1.00671141e-001	2.44443353e+006
1.20805369e-001	2.24521631e+006
1.40939597e-001	2.15908262e+006
1.61073826e-001	2.03915785e+006
1.81208054e-001	1.93265041e+006
2.01342282e-001	1.85386964e+006
2.21476510e-001	1.77514214e+006
2.41610738e-001	1.70658885e+006
2.61744966e-001	1.64738050e+006
2.81879195e-001	1.59068923e+006
3.02013423e-001	1.53410438e+006
3.22147651e-001	1.48220838e+006
3.42281879e-001	1.43528427e+006
3.62416107e-001	1.39773817e+006
3.82550336e-001	1.36303651e+006
4.02684564e-001	1.32836442e+006
4.22818792e-001	1.29372431e+006
4.42953020e-001	1.25408402e+006
4.63087248e-001	1.22202673e+006
4.83221477e-001	1.19341037e+006
5.03355705e-001	1.16479403e+006
5.23489933e-001	1.13617770e+006
5.43624161e-001	1.11079532e+006
5.63758389e-001	1.09543261e+006
5.83892617e-001	1.07714999e+006

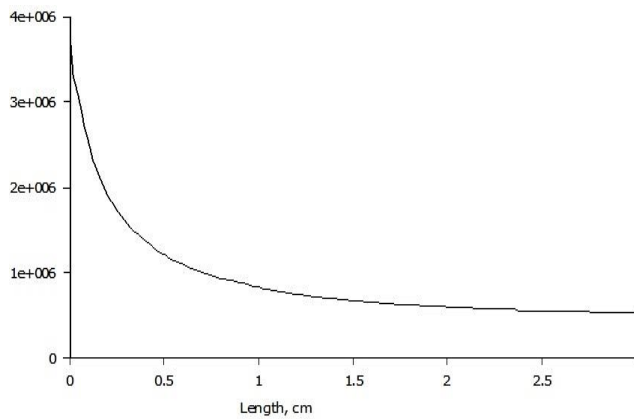
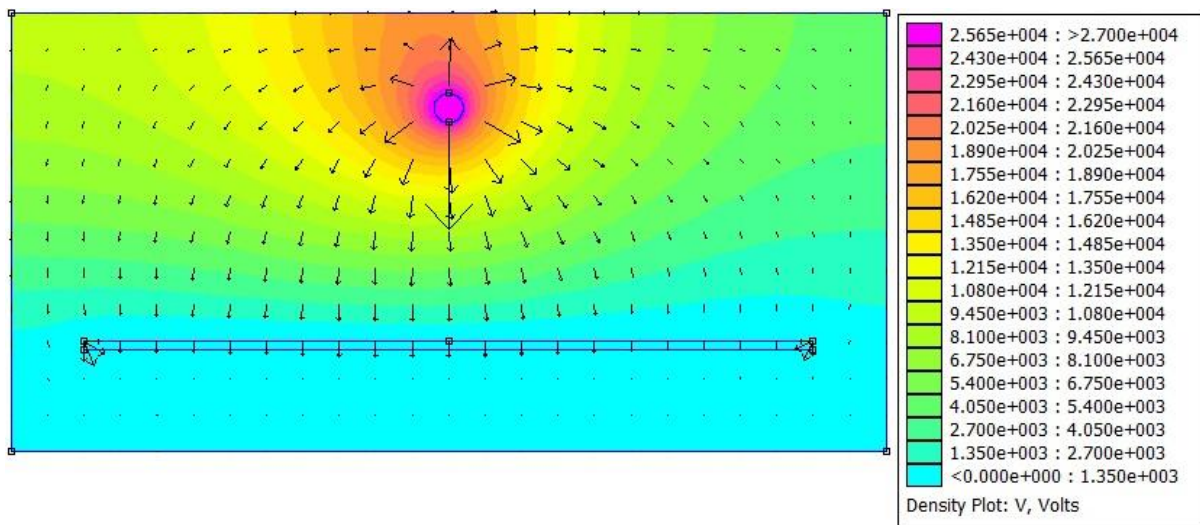
$$E_{maks} = 3,62921620 \cdot 10^6 \text{ V/m}$$

$$= 36,2921620 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{26,20}{3} = 8,73 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{8,73}{36,2921620} \times 100\% = 24,05478075\%$$

5. Perhitungan Efisiensi 26,20 kV



|E|, V/m

9 - Notepad

% Column 0: Length, cm	% Column 1: E , V/m
0.00000000e+000	3.74003197e+006
2.01342282e-002	3.29668469e+006
4.02684564e-002	3.11308544e+006
6.04026846e-002	2.89125708e+006
8.05369128e-002	2.69946440e+006
1.00671141e-001	2.51907272e+006
1.20805369e-001	2.31377253e+006
1.40939597e-001	2.22500881e+006
1.61073826e-001	2.10142221e+006
1.81208054e-001	1.99166263e+006
2.01342282e-001	1.91047635e+006
2.21476510e-001	1.82934495e+006
2.41610738e-001	1.75869844e+006
2.61744966e-001	1.69768220e+006
2.81879195e-001	1.63925989e+006
3.02013423e-001	1.58094727e+006
3.22147651e-001	1.52746666e+006
3.42281879e-001	1.47910975e+006
3.62416107e-001	1.44041720e+006
3.82550336e-001	1.40465594e+006
4.02684564e-001	1.36892517e+006
4.22818792e-001	1.33322734e+006
4.42953020e-001	1.29237666e+006
4.63087248e-001	1.25934052e+006
4.83221477e-001	1.22985038e+006
5.03355705e-001	1.20036026e+006
5.23489933e-001	1.17087015e+006
5.43624161e-001	1.14471273e+006
5.63758389e-001	1.12888093e+006
5.83892617e-001	1.11004007e+006

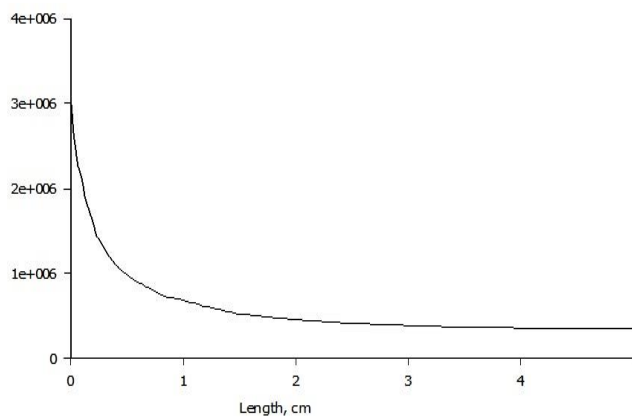
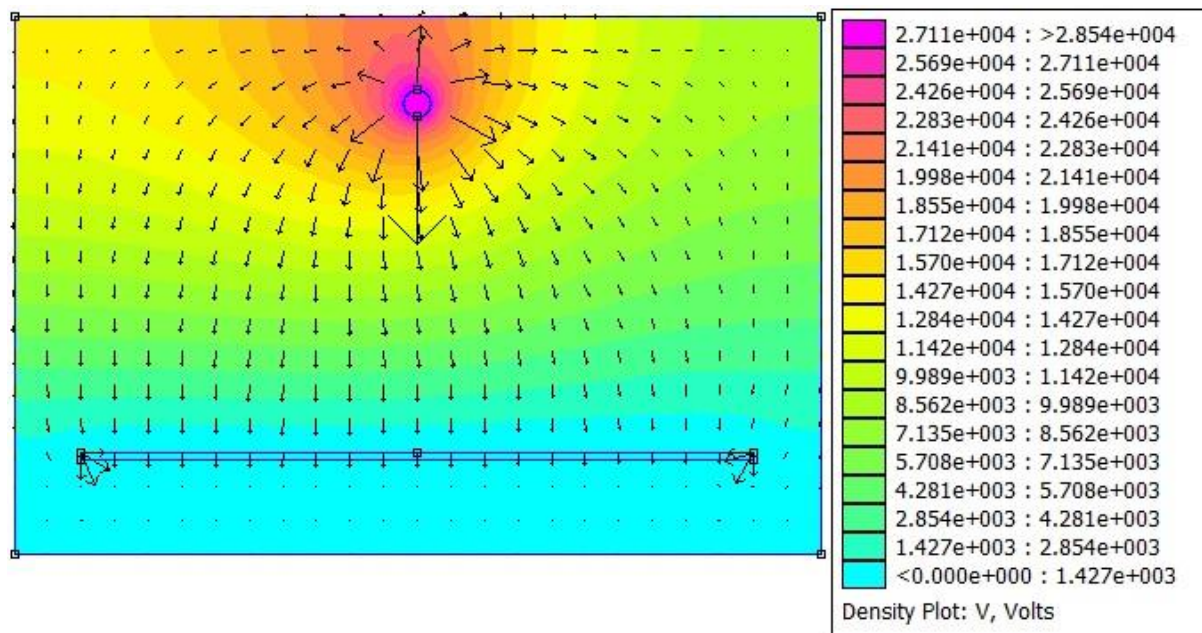
$$E_{maks} = 3,74003197 \cdot 10^6 \text{ V/m}$$

$$= 37,4003197 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{27}{3} = 9 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{9}{37,4003197} \times 100\% = 24,06396542\%$$

- B. Perhitungan Efisiensi polaritas positif jarak sela 5 cm
 6. Perhitungan Efisiensi 28,54 kV



|E|, V/m

23 - Notepad

% Column 0: Length, cm	% Column 1: E , V/m
0.00000000e+000	3.06230868e+006
3.35570470e-002	2.62929757e+006
6.71140940e-002	2.26286928e+006
1.00671141e-001	2.10797707e+006
1.34228188e-001	1.89077735e+006
1.67785235e-001	1.73480024e+006
2.01342282e-001	1.59754766e+006
2.34899329e-001	1.45311622e+006
2.68456376e-001	1.36188691e+006
3.02013423e-001	1.28457567e+006
3.35570470e-001	1.21834767e+006
3.69127517e-001	1.15212281e+006
4.02684564e-001	1.09650248e+006
4.36241611e-001	1.05946877e+006
4.69798658e-001	1.02244380e+006
5.03355705e-001	9.85374799e+005
5.36912752e-001	9.47907847e+005
5.70469799e-001	9.13869079e+005
6.04026846e-001	8.89494881e+005
6.37583893e-001	8.65137489e+005
6.71140940e-001	8.40798364e+005
7.04697987e-001	8.16479140e+005
7.38255034e-001	7.92463832e+005
7.71812081e-001	7.69288585e+005
8.05369128e-001	7.46117468e+005
8.38926174e-001	7.30127348e+005
8.72483221e-001	7.19791485e+005
9.06040268e-001	7.09455636e+005
9.39597315e-001	6.99119801e+005
9.73154362e-001	6.88783981e+005

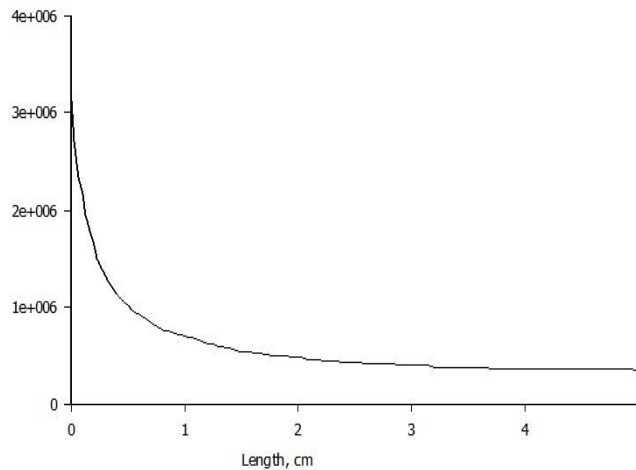
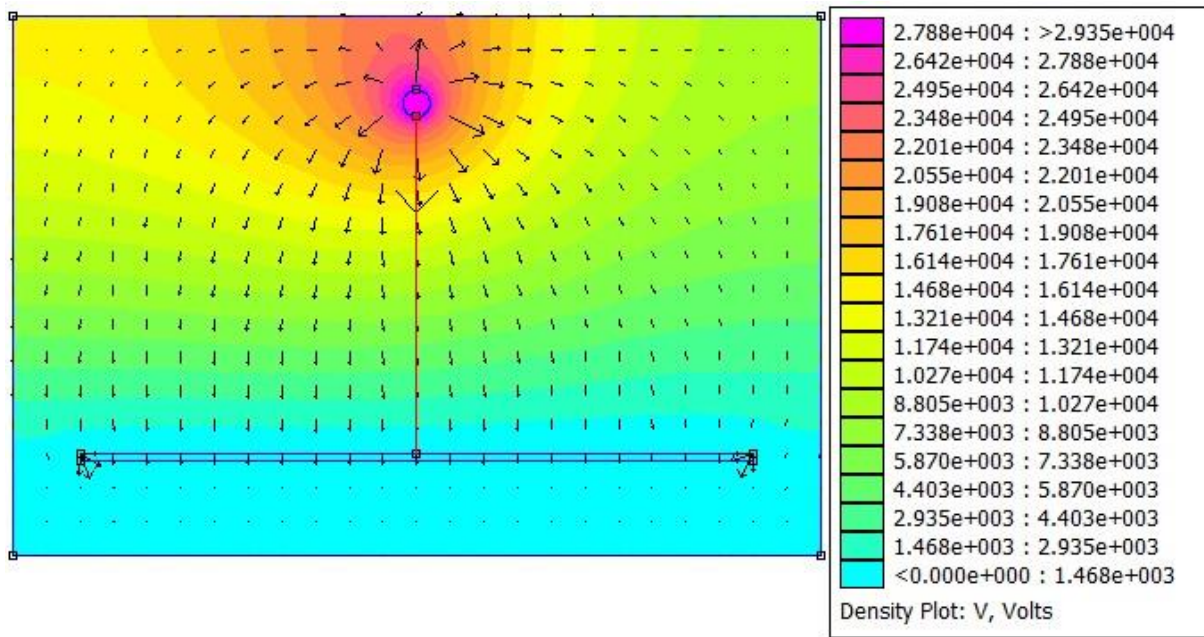
$$E_{maks} = 3,06230868 \cdot 10^6 \text{ V/m}$$

$$= 30,6230868 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{28,54}{5} = 5,708 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{5,708}{30,6230868} \times 100\% = 18,63953179\%$$

7. Perhitungan Efisiensi 29,35 kV



|E|, V/m

25 - Notepad

% Column 0: Length, cm	% Column 1: E , V/m
0.00000000e+000	3.14922073e+006
3.35570470e-002	2.70392024e+006
6.71140940e-002	2.32709227e+006
1.00671141e-001	2.16780403e+006
1.34228188e-001	1.94443992e+006
1.67785235e-001	1.78403598e+006
2.01342282e-001	1.64288801e+006
2.34899329e-001	1.49435743e+006
2.68456376e-001	1.40053892e+006
3.02013423e-001	1.32103349e+006
3.35570470e-001	1.25292586e+006
3.69127517e-001	1.18482146e+006
4.02684564e-001	1.12762256e+006
4.36241611e-001	1.08953779e+006
4.69798658e-001	1.05146200e+006
5.03355705e-001	1.01334094e+006
5.36912752e-001	9.74810627e+005
5.70469799e-001	9.39805798e+005
6.04026846e-001	9.14739830e+005
6.37583893e-001	8.89691146e+005
6.71140940e-001	8.64661247e+005
7.04697987e-001	8.39651814e+005
7.38255034e-001	8.14954922e+005
7.71812081e-001	7.91121933e+005
8.05369128e-001	7.67293192e+005
8.38926174e-001	7.50849252e+005
8.72483221e-001	7.40220045e+005
9.06040268e-001	7.29590852e+005
9.39597315e-001	7.18961674e+005
9.73154362e-001	7.08332510e+005

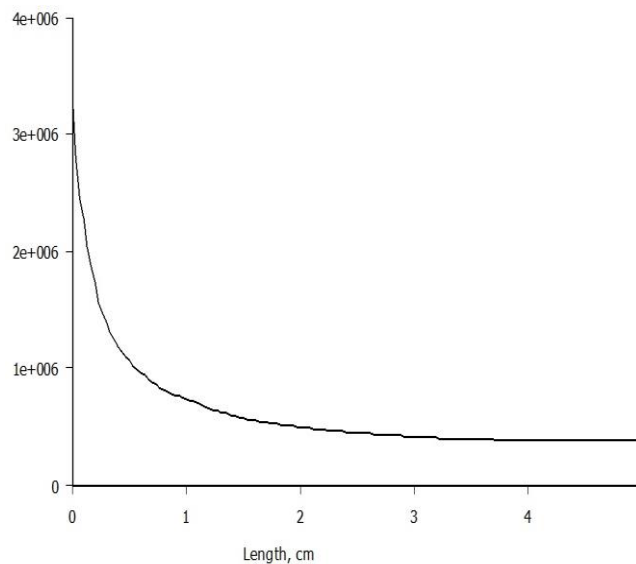
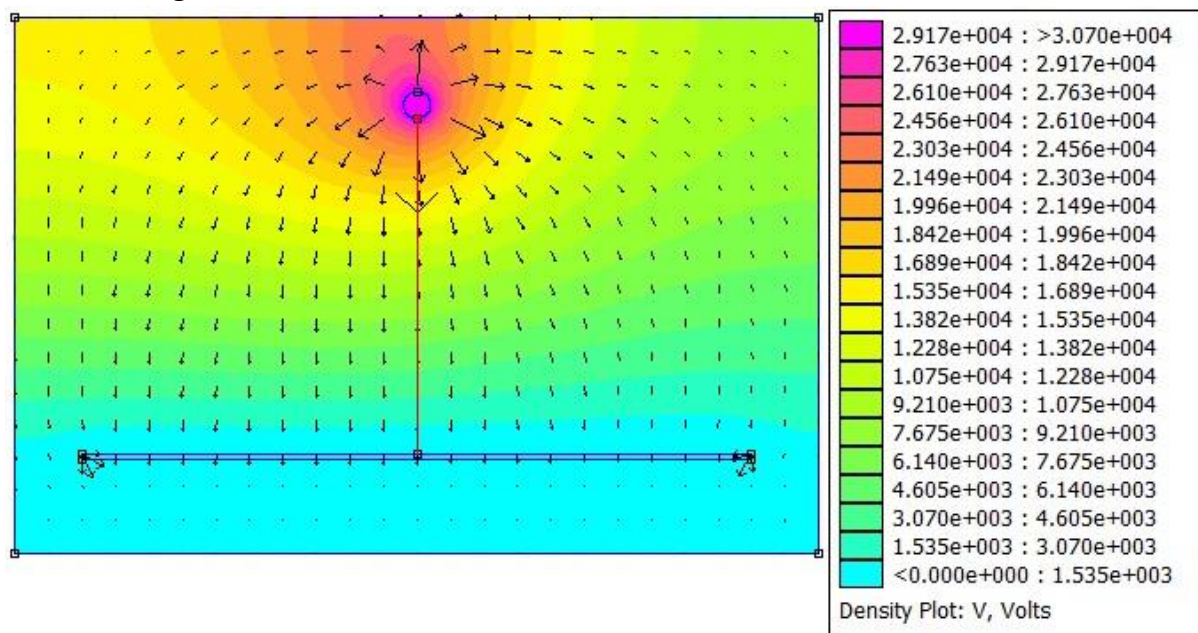
$$E_{maks} = 3,14922073 \cdot 10^6 \text{ V/m}$$

$$= 31,4922073 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{29,35}{5} = 5,87 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{5,87}{31,4922073} \times 100\% = 18,63953182\%$$

8. Perhitungan Efisiensi 30,70 kV



|E|, V

File	Edit	Format	View	Help
% Column 0: Length, cm				
% Column 1: E , V/m				
0.00000000e+000	3.29407416e+006			
3.35570470e-002	2.82829136e+006			
6.71140940e-002	2.43413059e+006			
1.00671141e-001	2.26751563e+006			
1.34228188e-001	2.03387753e+006			
1.67785235e-001	1.86609556e+006			
2.01342282e-001	1.71845526e+006			
2.34899329e-001	1.56309278e+006			
2.68456376e-001	1.46495894e+006			
3.02013423e-001	1.38179653e+006			
3.35570470e-001	1.31055619e+006			
3.69127517e-001	1.23931921e+006			
4.02684564e-001	1.17948935e+006			
4.36241611e-001	1.13965281e+006			
4.69798658e-001	1.09982567e+006			
5.03355705e-001	1.05995117e+006			
5.36912752e-001	1.01964859e+006			
5.70469799e-001	9.83033662e+005			
6.04026846e-001	9.56814746e+005			
6.37583893e-001	9.30613907e+005			
6.71140940e-001	9.04432718e+005			
7.04697987e-001	8.78272936e+005			
7.38255034e-001	8.52440072e+005			
7.71812081e-001	8.27510846e+005			
8.05369128e-001	8.02586064e+005			
8.38926174e-001	7.85385760e+005			
8.72483221e-001	7.74267645e+005			
9.06040268e-001	7.63149546e+005			
9.39597315e-001	7.52031461e+005			
9.73154362e-001	7.40913392e+005			

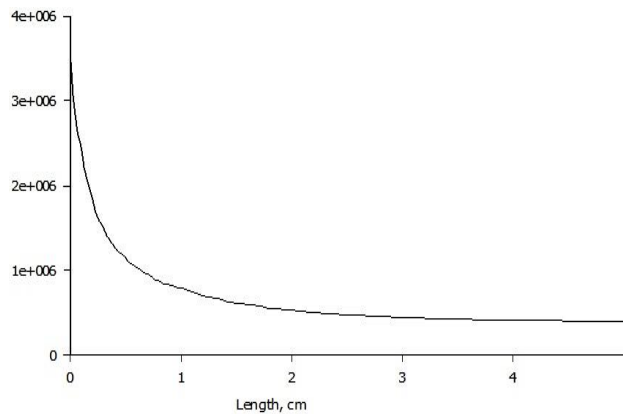
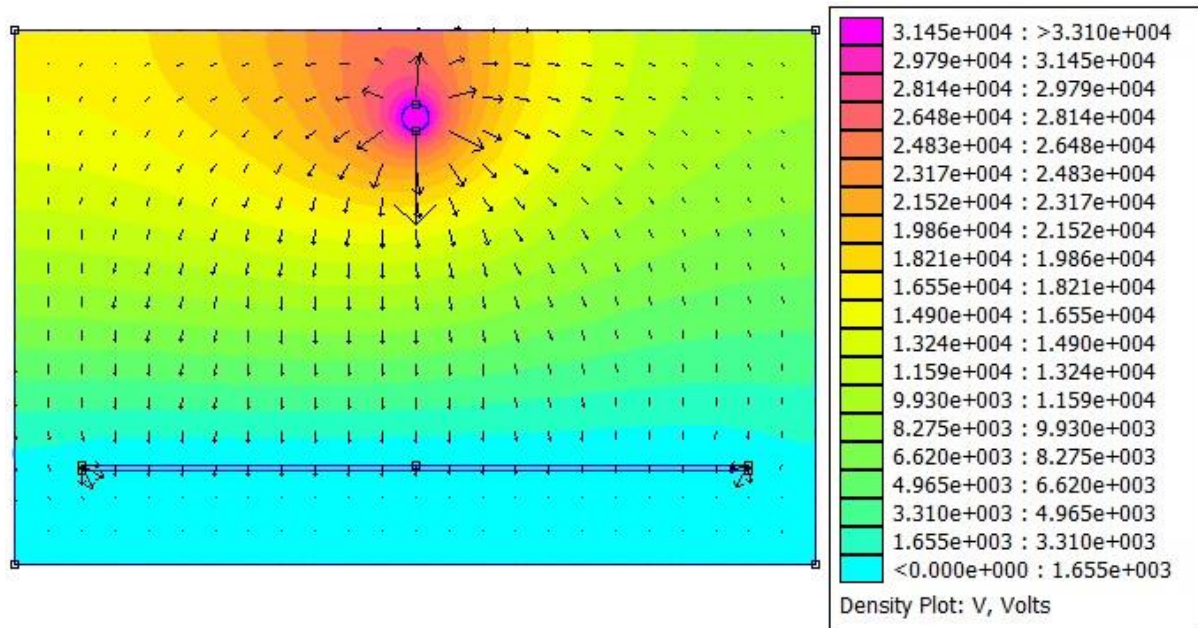
$$E_{maks} = 3,29407416 \cdot 10^6 \text{ V/m}$$

$$= 32,9407416 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{30,70}{5} = 6,14 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{6,14}{32,9407416} \times 100\% = 18,63953178\%$$

9. Perhitungan Efisiensi 33,10 kV



29 - Notepad

% Column 0: Length, cm	% Column 1: E , V/m
0.00000000e+000	3.55159136e+006
3.35570470e-002	3.04939557e+006
6.71140940e-002	2.62442093e+006
1.00671141e-001	2.44478070e+006
1.34228188e-001	2.19287773e+006
1.67785235e-001	2.01197925e+006
2.01342282e-001	1.85279704e+006
2.34899329e-001	1.68528896e+006
2.68456376e-001	1.57948342e+006
3.02013423e-001	1.48981972e+006
3.35570470e-001	1.41301009e+006
3.69127517e-001	1.33620410e+006
4.02684564e-001	1.27169699e+006
4.36241611e-001	1.22874619e+006
4.69798658e-001	1.18580553e+006
5.03355705e-001	1.14281380e+006
5.36912752e-001	1.09936054e+006
5.70469799e-001	1.05988320e+006
6.04026846e-001	1.03161460e+006
6.37583893e-001	1.00336548e+006
6.71140940e-001	9.75137556e+005
7.04697987e-001	9.46932710e+005
7.38255034e-001	9.19080338e+005
7.71812081e-001	8.92202248e+005
8.05369128e-001	8.65328949e+005
8.38926174e-001	8.46783995e+005
8.72483221e-001	8.34796712e+005
9.06040268e-001	8.22809445e+005
9.39597315e-001	8.10822194e+005
9.73154362e-001	7.98834960e+005

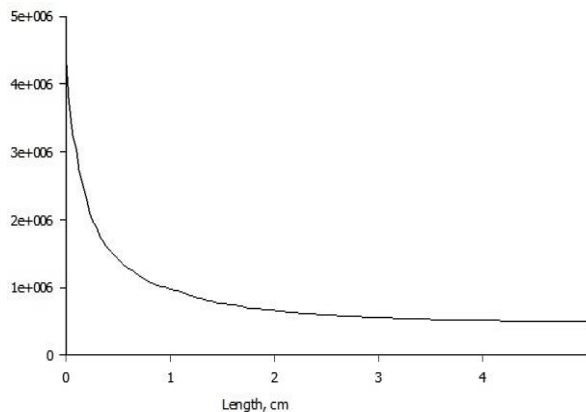
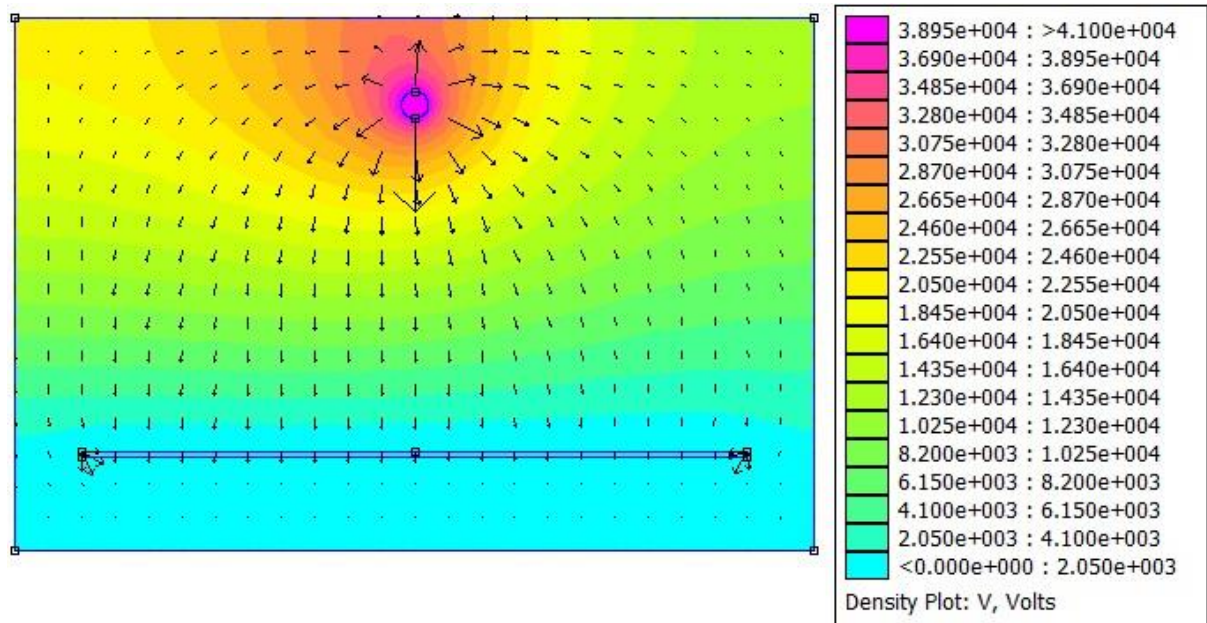
$$E_{maks} = 3,55159136 \cdot 10^6 \text{ V/m}$$

$$= 35,5159136 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{33,10}{5} = 6,62 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{6,62}{35,5159136} \times 100\% = 18,63953177\%$$

10. Perhitungan Efisiensi 41 kV



|E|, V/m

31 - Notepad

% Column 0: Length, cm	% Column 1: E , V/m
0.00000000e+000	4.39925213e+006
3.35570470e-002	3.77719693e+006
6.71140940e-002	3.25079329e+006
1.00671141e-001	3.02827821e+006
1.34228188e-001	2.71625338e+006
1.67785235e-001	2.49217974e+006
2.01342282e-001	2.29500540e+006
2.34899329e-001	2.08751804e+006
2.68456376e-001	1.95645982e+006
3.02013423e-001	1.84539602e+006
3.35570470e-001	1.75025419e+006
3.69127517e-001	1.65511686e+006
4.02684564e-001	1.57521379e+006
4.36241611e-001	1.52201190e+006
4.69798658e-001	1.46882256e+006
5.03355705e-001	1.41556996e+006
5.36912752e-001	1.36174568e+006
5.70469799e-001	1.31284626e+006
6.04026846e-001	1.27783077e+006
6.37583893e-001	1.24283942e+006
6.71140940e-001	1.20787431e+006
7.04697987e-001	1.17293780e+006
7.38255034e-001	1.13843788e+006
7.71812081e-001	1.10514478e+006
8.05369128e-001	1.07185761e+006
8.38926174e-001	1.04888652e+006
8.72483221e-001	1.03403822e+006
9.06040268e-001	1.01918995e+006
9.39597315e-001	1.00434169e+006
9.73154362e-001	9.89493456e+005

$$E_{maks} = 4,39925213 \cdot 10^6 \text{ V/m}$$

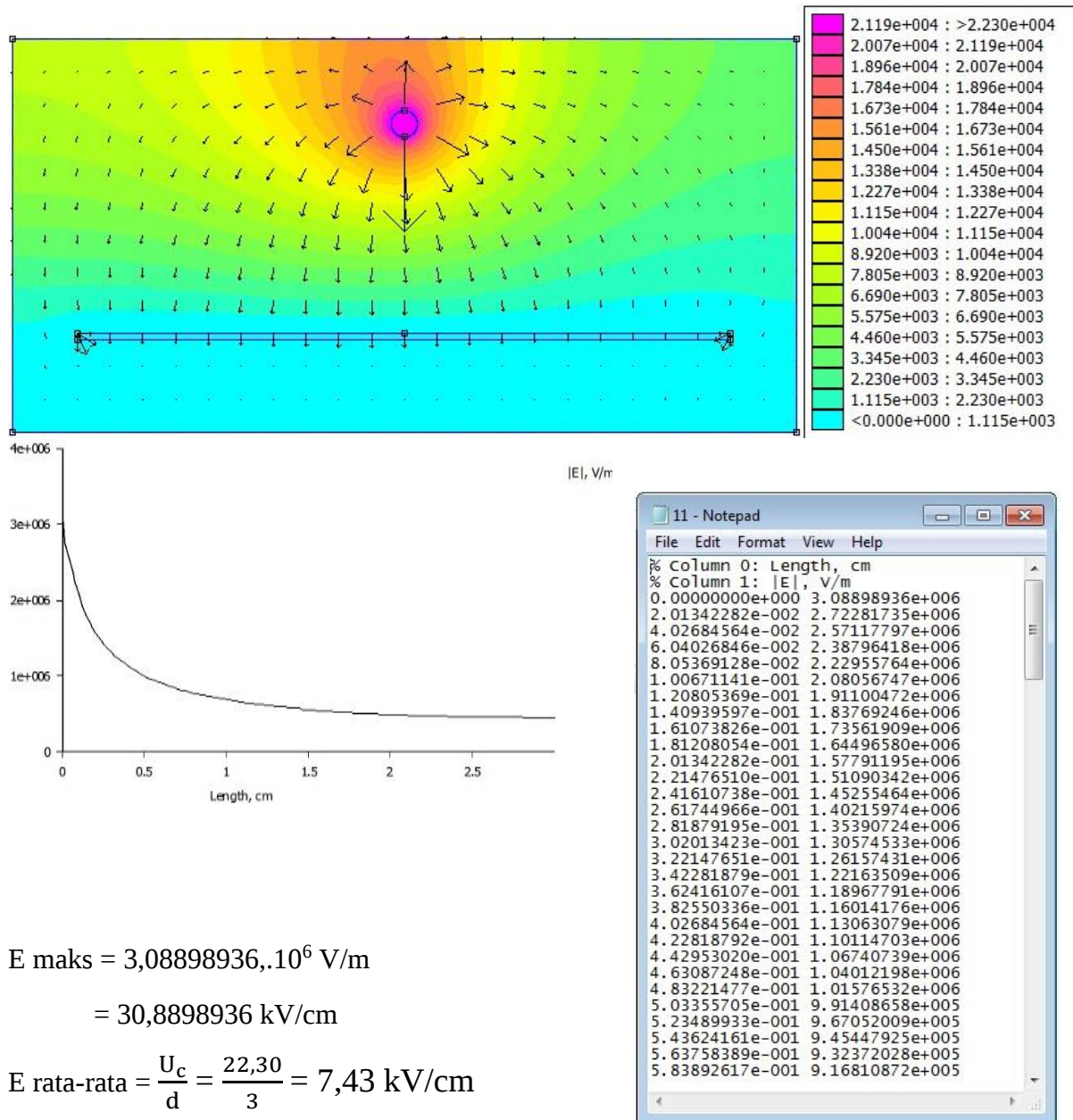
$$= 43,9925213 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{41}{5} = 8,2 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{8,2}{43,9925213} \times 100\% = 18,63953181\%$$

C. Perhitungan Efisiensi polaritas negatif jarak sela 3 cm

11. Perhitungan Efisiensi 22,30 kV



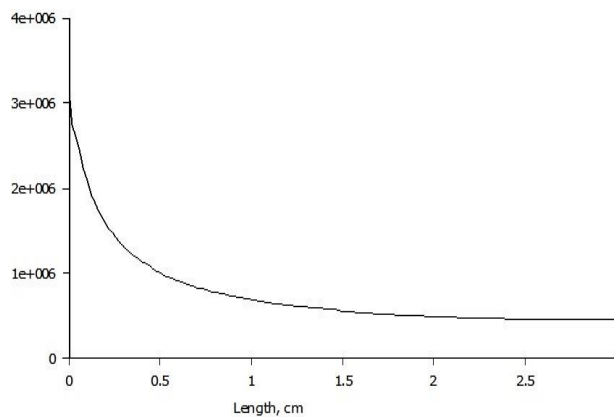
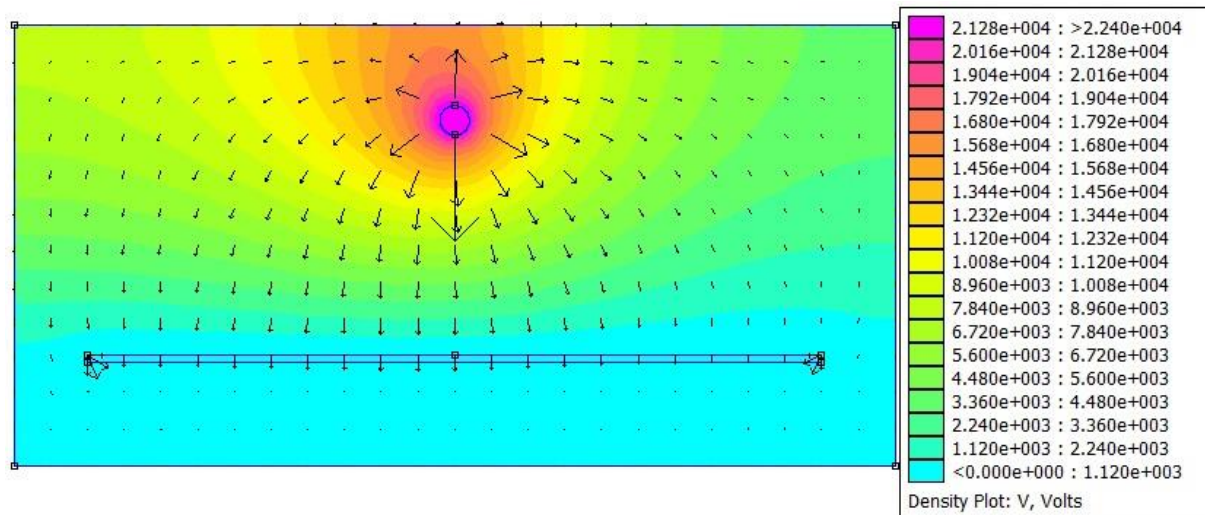
$$E_{maks} = 3,08898936 \cdot 10^6 \text{ V/m}$$

$$= 30,8898936 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{22,30}{3} = 7,43 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{7,43}{30,8898936} \times 100\% = 24,05317447\%$$

12. Perhitungan Efisiensi 22,40 kV



|E|, V/m

13 - Notepad	
File Edit Format View Help	
% Column 0: Length, cm	
% Column 1: E , V/m	
0.00000000e+000	3.10284133e+006
2.01342282e-002	2.73502730e+006
4.02684564e-002	2.58270792e+006
6.04026846e-002	2.39867254e+006
8.05369128e-002	2.23955565e+006
1.00671141e-001	2.08989737e+006
1.20805369e-001	1.91957425e+006
1.40939597e-001	1.84593323e+006
1.61073826e-001	1.74340213e+006
1.81208054e-001	1.65234233e+006
2.01342282e-001	1.58498779e+006
2.21476510e-001	1.51767877e+006
2.41610738e-001	1.45906833e+006
2.61744966e-001	1.40844745e+006
2.81879195e-001	1.35997858e+006
3.02013423e-001	1.31160070e+006
3.22147651e-001	1.26723160e+006
3.42281879e-001	1.22711327e+006
3.62416107e-001	1.19501279e+006
3.82550336e-001	1.16534419e+006
4.02684564e-001	1.13570088e+006
4.22818792e-001	1.10608491e+006
4.42953020e-001	1.07219397e+006
4.63087248e-001	1.04478621e+006
4.83221477e-001	1.02032032e+006
5.03355705e-001	9.95854437e+005
5.23489933e-001	9.71388566e+005
5.43624161e-001	9.49687601e+005
5.63758389e-001	9.36553069e+005
5.83892617e-001	9.20922132e+005

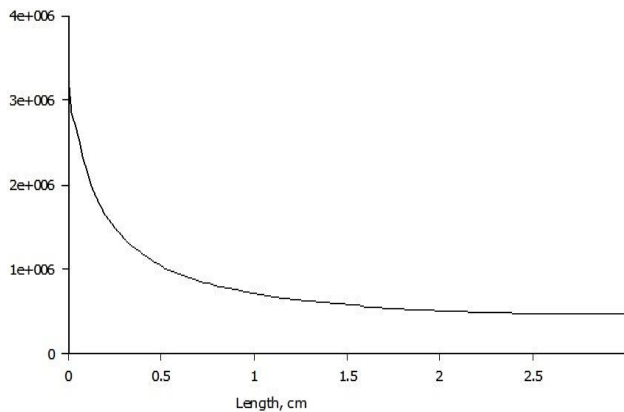
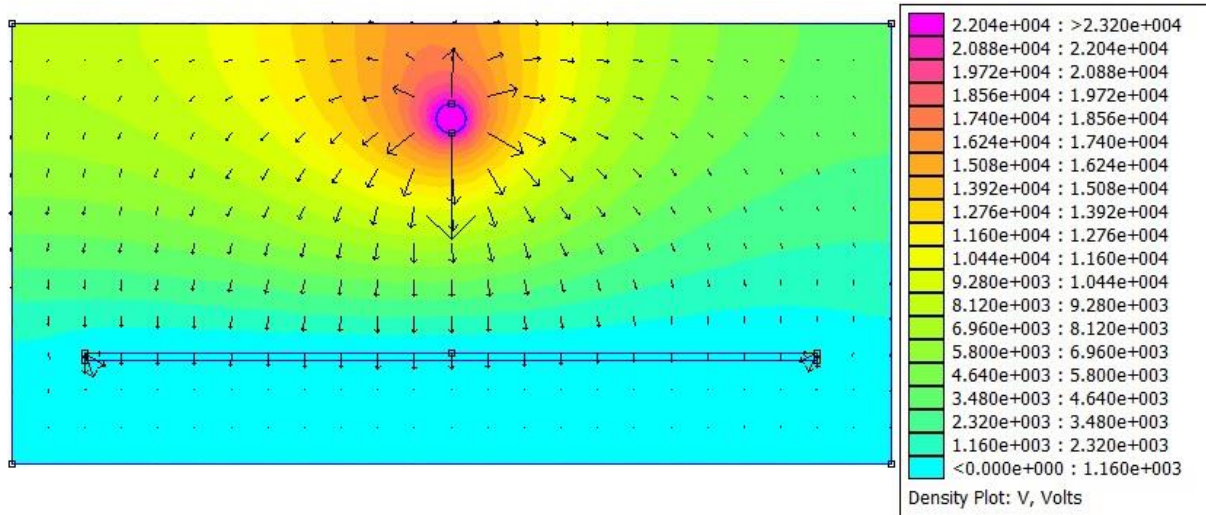
$$E_{maks} = 3,10284133 \cdot 10^6 \text{ V/m}$$

$$= 31,0284133 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{22,40}{3} = 7,46 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{7,46}{31,0284133} \times 100\% = 24,0424798\%$$

13. Perhitungan Efisiensi 23,20 kV



|E|, V/m

15 - Notepad

% Column 0: Length, cm	% Column 1: E , V/m
0.00000000e+000	3.21365710e+006
2.01342282e-002	2.83270684e+006
4.02684564e-002	2.67494749e+006
6.04026846e-002	2.48433942e+006
8.05369128e-002	2.31953978e+006
1.00671141e-001	2.16453656e+006
1.20805369e-001	1.98813047e+006
1.40939597e-001	1.91185942e+006
1.61073826e-001	1.80566649e+006
1.81208054e-001	1.71135456e+006
2.01342282e-001	1.64159449e+006
2.21476510e-001	1.57188159e+006
2.41610738e-001	1.51117792e+006
2.61744966e-001	1.45874915e+006
2.81879195e-001	1.40854924e+006
3.02013423e-001	1.35844358e+006
3.22147651e-001	1.31248987e+006
3.42281879e-001	1.27093875e+006
3.62416107e-001	1.23769182e+006
3.82550336e-001	1.20696362e+006
4.02684564e-001	1.17626163e+006
4.22818792e-001	1.14558794e+006
4.42953020e-001	1.11048661e+006
4.63087248e-001	1.08210000e+006
4.83221477e-001	1.05676033e+006
5.03355705e-001	1.03142067e+006
5.23489933e-001	1.00608101e+006
5.43624161e-001	9.83605016e+005
5.63758389e-001	9.70001393e+005
5.83892617e-001	9.53812208e+005

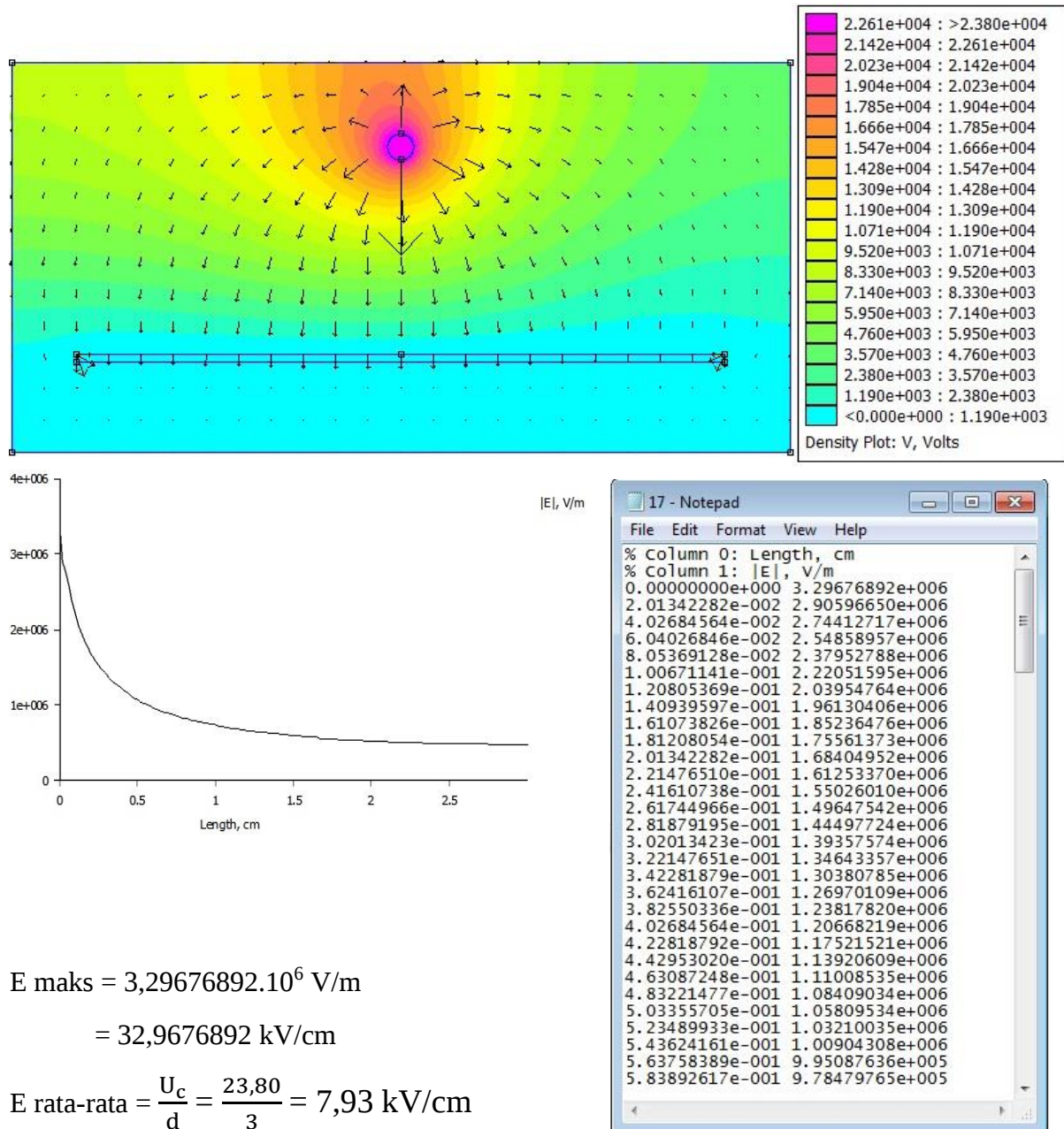
$$E_{maks} = 3,21365710 \cdot 10^6 \text{ V/m}$$

$$= 32,1365710 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{23,20}{3} = 7,73 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{7,73}{32,1365710} \times 100\% = 24,05359302\%$$

14. Perhitungan Efisiensi 23,80 kV



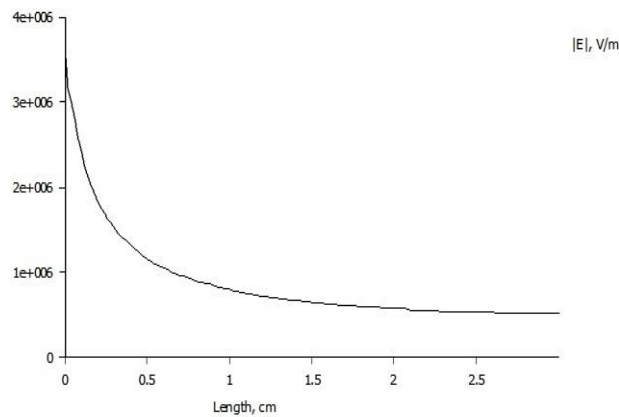
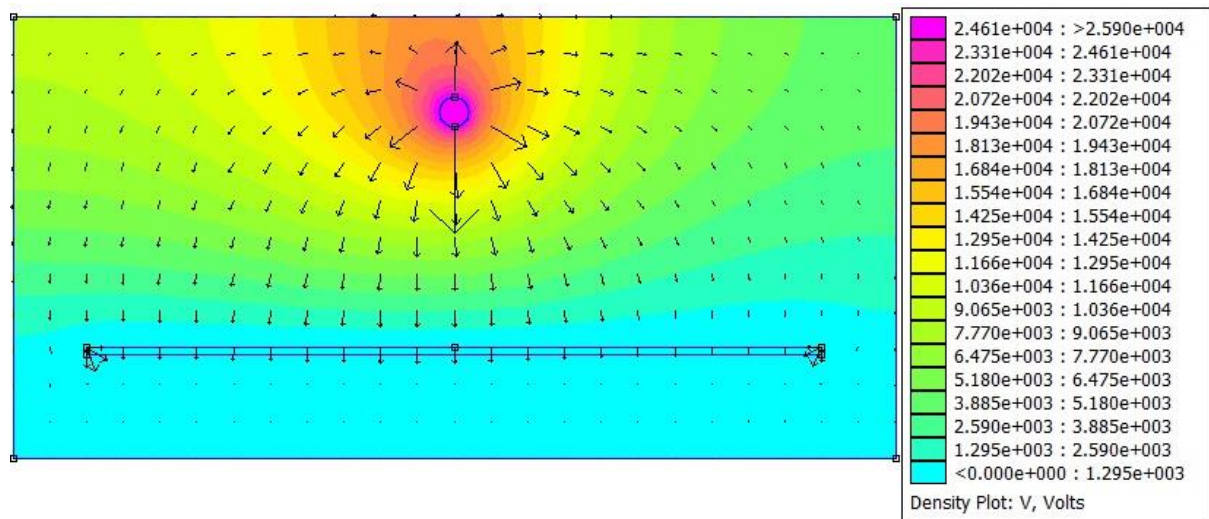
$$E_{maks} = 3,29676892 \cdot 10^6 \text{ V/m}$$

$$= 32,9676892 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{23,80}{3} = 7,93 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{7,93}{32,9676892} \times 100\% = 24,05385452\%$$

15. Perhitungan Efisiensi 25,90 kV



19 - Notepad

% Column 0: Length, cm	% Column 1: E , V/m
0.00000000e+000	3.58766029e+006
2.01342282e-002	3.16237531e+006
4.02684564e-002	2.98625603e+006
6.04026846e-002	2.77346512e+006
8.05369128e-002	2.58948622e+006
1.00671141e-001	2.41644383e+006
1.20805369e-001	2.21950773e+006
1.40939597e-001	2.13436030e+006
1.61073826e-001	2.01580871e+006
1.81208054e-001	1.91052082e+006
2.01342282e-001	1.83264213e+006
2.21476510e-001	1.75481608e+006
2.41610738e-001	1.68704776e+006
2.61744966e-001	1.62851737e+006
2.81879195e-001	1.57247523e+006
3.02013423e-001	1.51653830e+006
3.22147651e-001	1.46523653e+006
3.42281879e-001	1.41884972e+006
3.62416107e-001	1.38173354e+006
3.82550336e-001	1.34742922e+006
4.02684564e-001	1.31315415e+006
4.22818792e-001	1.27891067e+006
4.42953020e-001	1.23972428e+006
4.63087248e-001	1.20803405e+006
4.83221477e-001	1.17974537e+006
5.03355705e-001	1.15145669e+006
5.23489933e-001	1.12316803e+006
5.43624161e-001	1.09807629e+006
5.63758389e-001	1.08288949e+006
5.83892617e-001	1.06481621e+006

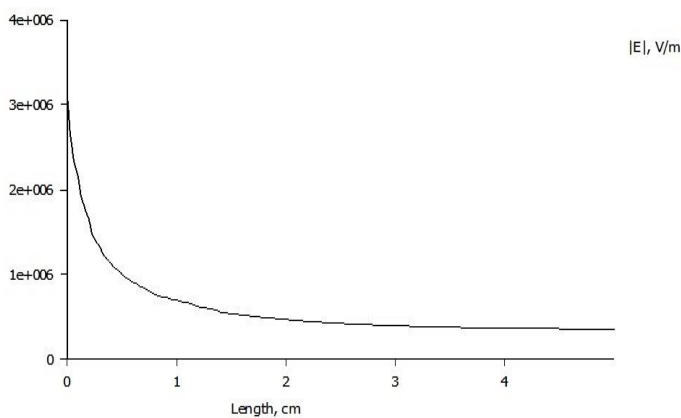
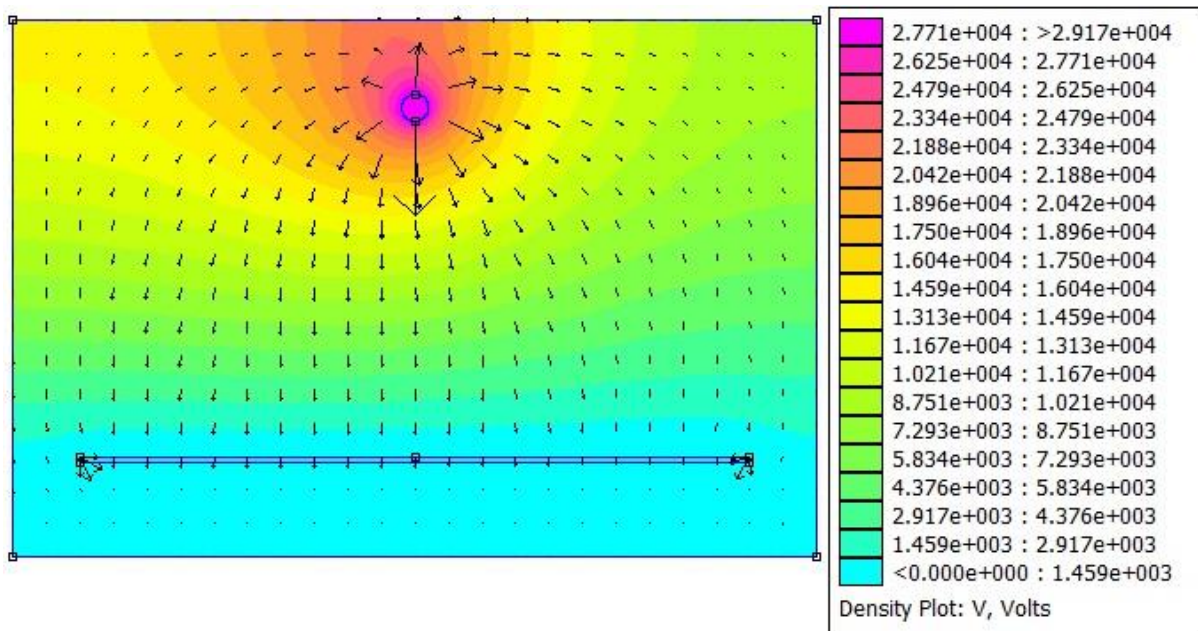
$$E_{maks} = 3,58766029 \cdot 10^6 \text{ V/m}$$

$$= 35,8766029 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{25,90}{3} = 8,63 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{7,93}{35,8766029} \times 100\% = 24,05467436\%$$

D. .Perhitungan Efisiensi polaritas negatif jarak sela 5 cm
 16. Perhitungan Efisiensi 29,17 kV



33 - Notepad

% Column 0: Length, cm	% Column 1: E , V/m
0.00000000e+000	3.12990694e+006
3.35570470e-002	2.68733743e+006
6.71140940e-002	2.31282050e+006
1.00671141e-001	2.15450915e+006
1.34228188e-001	1.93251490e+006
1.67785235e-001	1.77309470e+006
2.01342282e-001	1.63281238e+006
2.34899329e-001	1.48519271e+006
2.68456376e-001	1.39194959e+006
3.02013423e-001	1.31293176e+006
3.35570470e-001	1.24524182e+006
3.69127517e-001	1.17755509e+006
4.02684564e-001	1.12070698e+006
4.36241611e-001	1.08285578e+006
4.69798658e-001	1.04501351e+006
5.03355705e-001	1.00712624e+006
5.36912752e-001	9.68832232e+005
5.70469799e-001	9.34042082e+005
6.04026846e-001	9.09129841e+005
6.37583893e-001	8.84234778e+005
6.71140940e-001	8.59358384e+005
7.04697987e-001	8.34502331e+005
7.38255034e-001	8.09556902e+005
7.71812081e-001	7.86270078e+005
8.05369128e-001	7.62587476e+005
8.38926174e-001	7.46244385e+005
8.72483221e-001	7.35680365e+005
9.06040268e-001	7.25116360e+005
9.39597315e-001	7.14552369e+005
9.73154362e-001	7.03988393e+005

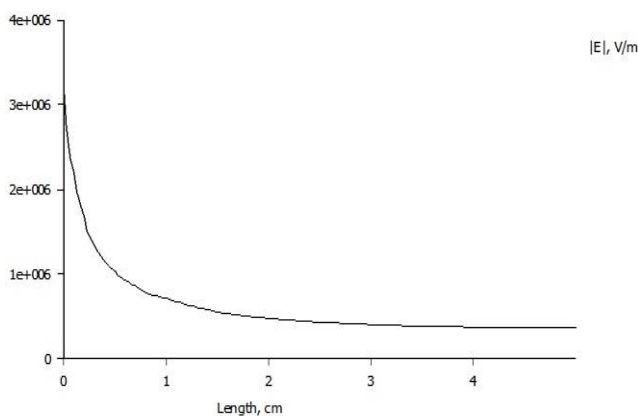
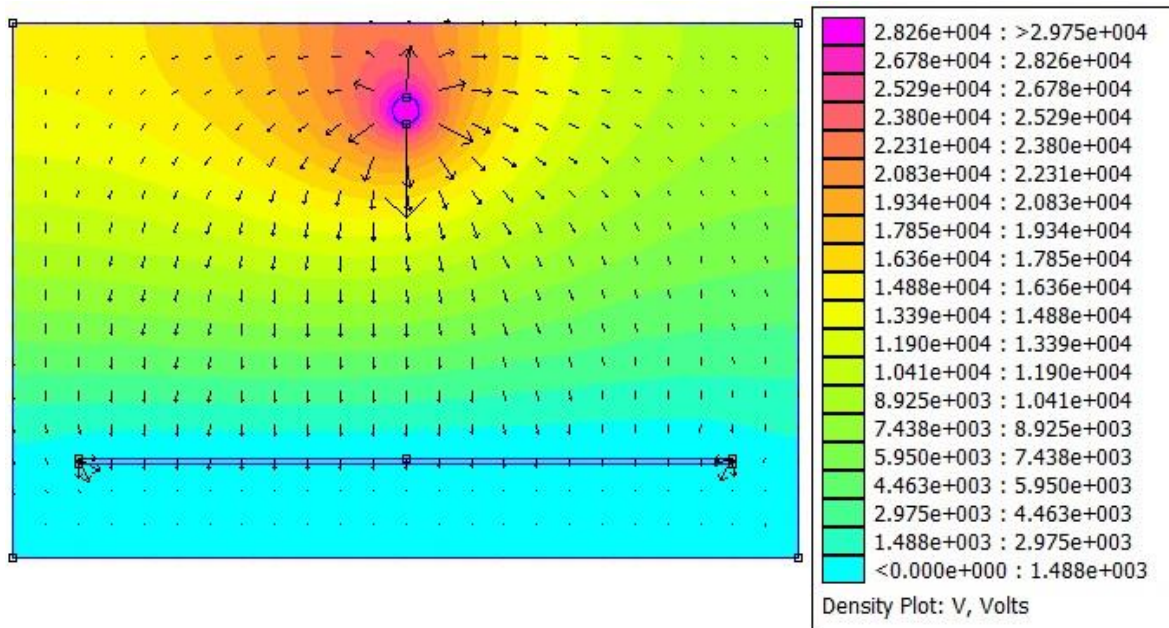
$$E_{maks} = 3,12990694 \cdot 10^6 \text{ V/m}$$

$$= 31,2990694 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{29,17}{5} = 5,834 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{5,834}{31,2990694} \times 100\% = 18,63953182\%$$

17. Perhitungan Efisiensi 29,75 kV



35 - Notepad

% Column 0: Length, cm	% Column 1: $ E $, V/m
0.00000000e+000	3.19214027e+006
3.35570470e-002	2.74077095e+006
6.71140940e-002	2.35880733e+006
1.00671141e-001	2.19734821e+006
1.34228188e-001	1.97093995e+006
1.67785235e-001	1.80834993e+006
2.01342282e-001	1.66527831e+006
2.34899329e-001	1.51472346e+006
2.68456376e-001	1.41962633e+006
3.02013423e-001	1.33903736e+006
3.35570470e-001	1.27000152e+006
3.69127517e-001	1.20096894e+006
4.02684564e-001	1.14299050e+006
4.36241611e-001	1.10438668e+006
4.69798658e-001	1.06579198e+006
5.03355705e-001	1.02715138e+006
5.36912752e-001	9.88095951e+005
5.70469799e-001	9.52614054e+005
6.04026846e-001	9.27206472e+005
6.37583893e-001	9.01816408e+005
6.71140940e-001	8.76445387e+005
7.04697987e-001	8.51095109e+005
7.38255034e-001	8.26061633e+005
7.71812081e-001	8.01903833e+005
8.05369128e-001	7.77750339e+005
8.38926174e-001	7.61082291e+005
8.72483221e-001	7.50308223e+005
9.06040268e-001	7.39534169e+005
9.39597315e-001	7.28760129e+005
9.73154362e-001	7.17986105e+005

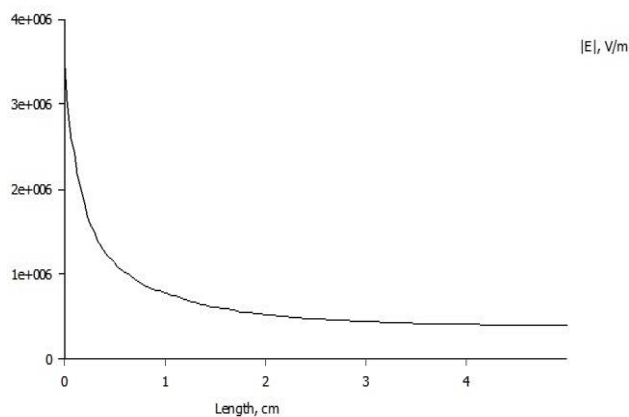
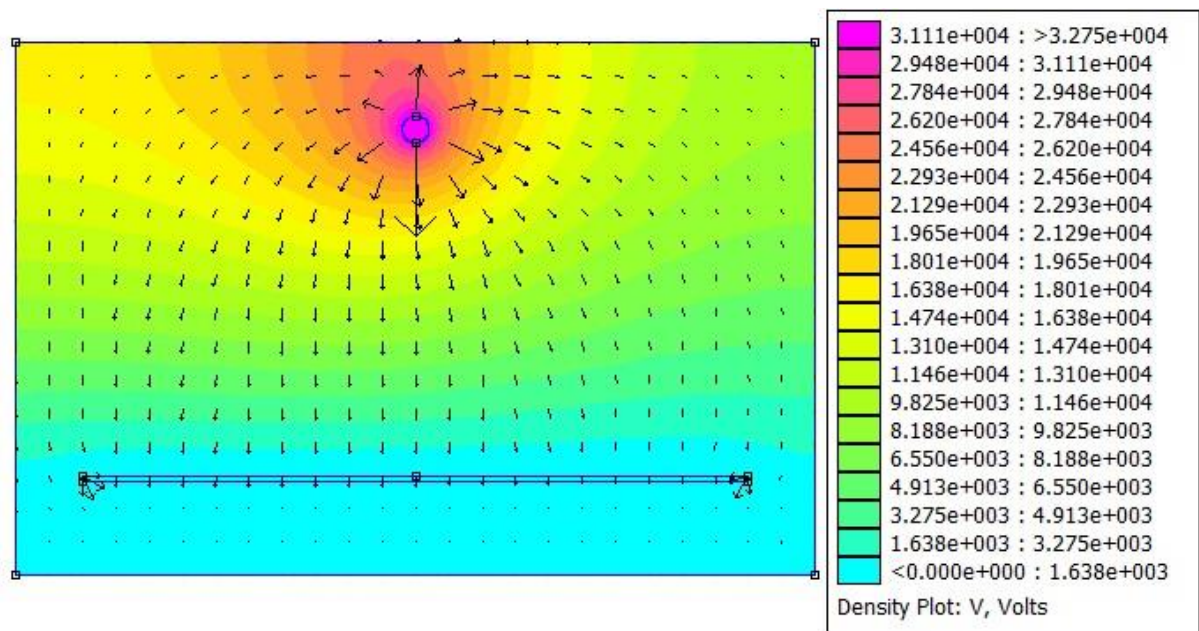
$$E_{\text{maks}} = 3,19214027 \cdot 10^6 \text{ V/m}$$

$$= 31,9214027 \text{ kV/cm}$$

$$E_{\text{rata-rata}} = \frac{U_c}{d} = \frac{29,75}{5} = 5,95 \text{ kV/cm}$$

$$\eta = \frac{E_{\text{rata-rata}}}{E_{\text{maks}}} \times 100\% = \frac{5,95}{31,9214027} \times 100\% = 18,63953178\%$$

18. Perhitungan Efisiensi 32,75 kV



37 - Notepad

% Column 0: Length, cm	% Column 1: E , V/m
0.00000000e+000	3.51403677e+006
3.35570470e-002	3.01715121e+006
6.71140940e-002	2.59667025e+006
1.00671141e-001	2.41892954e+006
1.34228188e-001	2.16969020e+006
1.67785235e-001	1.99070455e+006
2.01342282e-001	1.83320553e+006
2.34899329e-001	1.66746868e+006
2.68456376e-001	1.56278193e+006
3.02013423e-001	1.47406634e+006
3.35570470e-001	1.39806889e+006
3.69127517e-001	1.32207505e+006
4.02684564e-001	1.25825004e+006
4.36241611e-001	1.21575341e+006
4.69798658e-001	1.17326680e+006
5.03355705e-001	1.13072967e+006
5.36912752e-001	1.08773588e+006
5.70469799e-001	1.04867598e+006
6.04026846e-001	1.02070628e+006
6.37583893e-001	9.92755878e+005
6.71140940e-001	9.64826434e+005
7.04697987e-001	9.36919826e+005
7.38255034e-001	9.09361966e+005
7.71812081e-001	8.82768085e+005
8.05369128e-001	8.56178945e+005
8.38926174e-001	8.37830085e+005
8.72483221e-001	8.25969556e+005
9.06040268e-001	8.14109043e+005
9.39597315e-001	8.02248546e+005
9.73154362e-001	7.90388065e+005

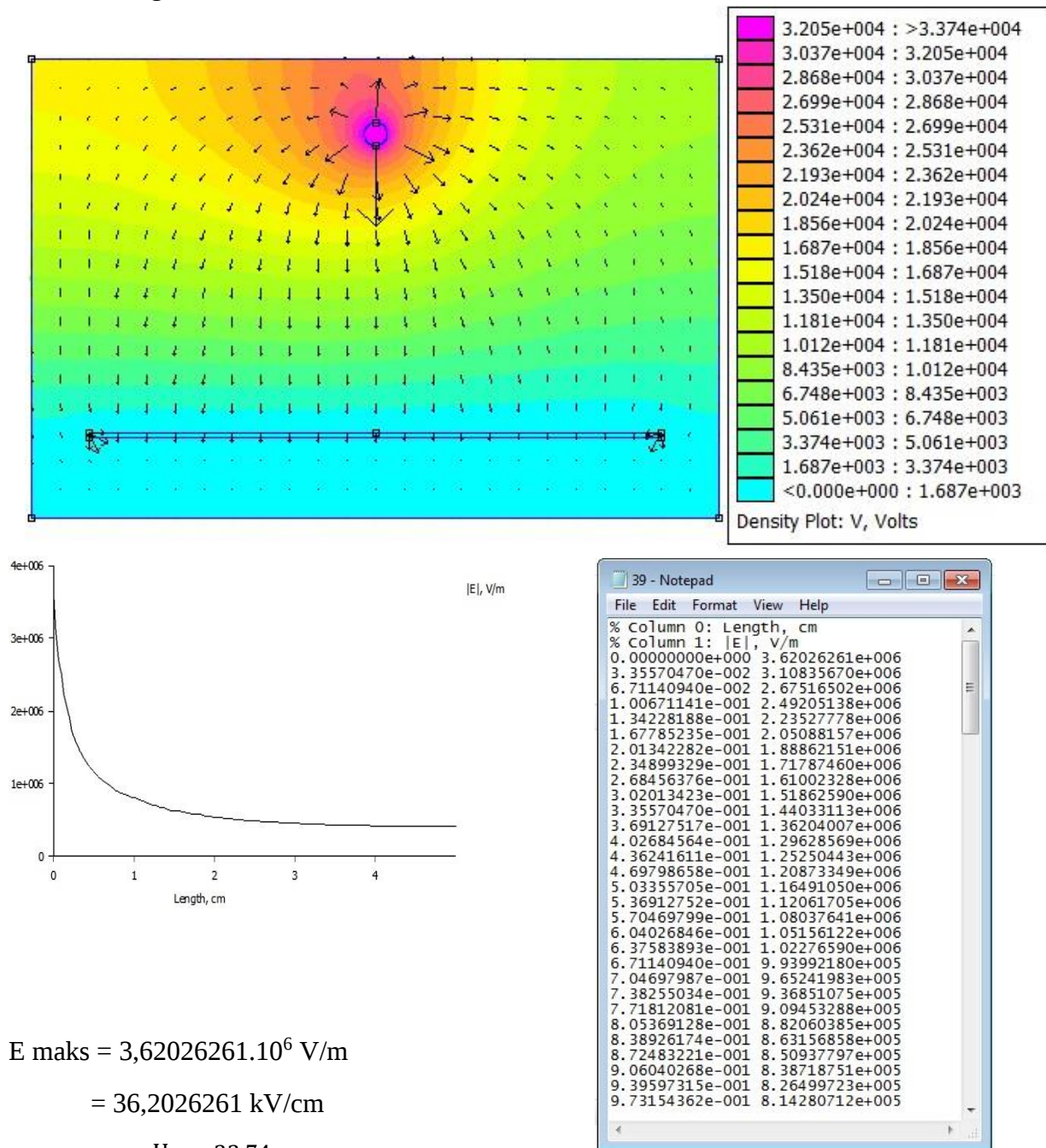
$$E_{maks} = 3,51403677 \cdot 10^6 \text{ V/m}$$

$$= 35,1403677 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{32,75}{5} = 6,55 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{6,55}{35,1403677} \times 100\% = 18,63953177\%$$

19. Perhitungan Efisiensi 33,74 kV



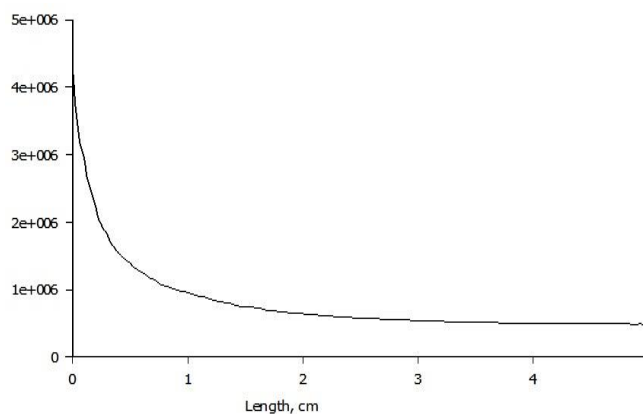
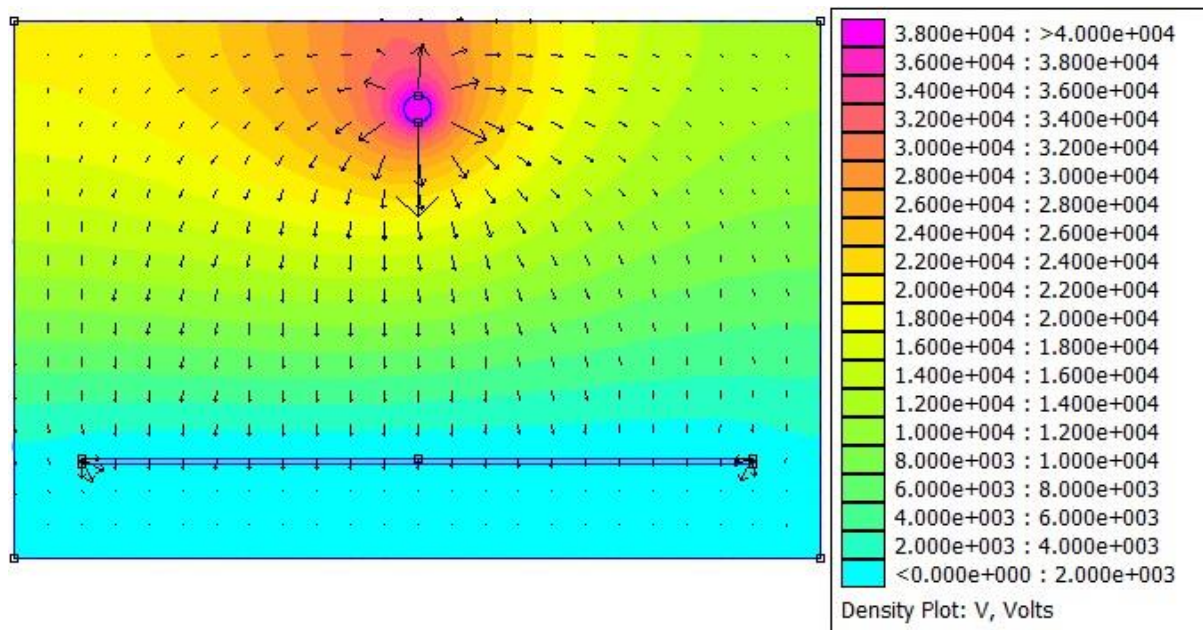
$$E_{maks} = 3,62026261 \cdot 10^6 \text{ V/m}$$

$$= 36,2026261 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{33,74}{5} = 6,748 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{6,748}{36,2026261} \times 100\% = 18,63953179\%$$

20. Perhitungan Efisiensi 40 kV



|E|, V/m

41 - Notepad

% Column 0: Length, cm	% Column 1: E , V/m
0.00000000e+000	4.29195330e+006
3.35570470e-002	3.68507018e+006
6.71140940e-002	3.17150565e+006
1.00671141e-001	2.95441776e+006
1.34228188e-001	2.65000329e+006
1.67785235e-001	2.43139486e+006
2.01342282e-001	2.23902966e+006
2.34899329e-001	2.03660297e+006
2.68456376e-001	1.90874129e+006
3.02013423e-001	1.80038636e+006
3.35570470e-001	1.70756506e+006
3.69127517e-001	1.61474815e+006
4.02684564e-001	1.53679394e+006
4.36241611e-001	1.48488966e+006
4.69798658e-001	1.43299762e+006
5.03355705e-001	1.38104387e+006
5.36912752e-001	1.32853237e+006
5.70469799e-001	1.28082562e+006
6.04026846e-001	1.24666416e+006
6.37583893e-001	1.21252626e+006
6.71140940e-001	1.17841397e+006
7.04697987e-001	1.14432956e+006
7.38255034e-001	1.11067110e+006
7.71812081e-001	1.07819003e+006
8.05369128e-001	1.04571474e+006
8.38926174e-001	1.02330392e+006
8.72483221e-001	1.00881778e+006
9.06040268e-001	9.94331656e+005
9.39597315e-001	9.79845552e+005
9.73154362e-001	9.65359469e+005

$$E_{maks} = 4,29195330 \cdot 10^6 \text{ V/m}$$

$$= 42,9195330 \text{ kV/cm}$$

$$E_{rata-rata} = \frac{U_c}{d} = \frac{40}{5} = 8 \text{ kV/cm}$$

$$\eta = \frac{E_{rata-rata}}{E_{maks}} \times 100\% = \frac{8}{42,9195330} \times 100\% = 18,6395318\%$$

Lampiran 2 Dokumentasi alat



Gambar proses pengujian tampak samping



Gambar proses pengujian tampak atas



Gambar elektroda plat setelah pengujian



Gambar pemotongan elektroda plat



Gambar Spesimen elektroda plat



Gambar Uji
Scanning
Electron
Microscope
(SEM)